INDEX

STRENGTH OF MATERIALS

Volume 7, Numbers 1-12, 1975

STRENGTH OF MATERIALS

Volume 7, Numbers 1-12, 1975

(A translation of Problemy Prochnosti)

A

Abrakhimov, U. - 1297
Abramov, S. G. - 1237
Adamovich, V. K. - 1325
Akhremenko, V. L. - 112
Alekseev, A. I. - 494
Aleksyuk, M. M. - 178
Ambartsumyan, V. Kh. - 1146
Andreeva, A. I. - 1390
Andreeva, N. P. - 1468
Andrianov, Yu. M. - 1009
Anfilof'ev, A. V. - 355
Anisomova, V. B. - 1521
Antropov, N. P. - 895
Anufriev, Yu. P. - 996, 1297
Arakelov, A. G. - 446
Artemov, V. A. - 1454, 1459
Askochenskii, Yu. B. - 731, 874
Asnis, E. A. - 97
Astanin, V. V. - 1085
Averchenko, P. A. - 1036
Averchenkov, E. A. - 518
Avetisyan, Yu. A. - 849
Avotin, S. S. - 1251

B

Babaskin, Yu. Z. - 220
Babenko, A. E. - 731
Babich, A. P. - 207
Babkin, Yu. P. - 449
Bakhtinova, G. A. - 709
Balakin, V. I. - 1422
Balov, V. P. - 713
Balter, M. A. - 981
Banas, F. P. - 744
Ban'kovskii, O. I. - 434
Barabanov, B. N. - 300
Barabanov, V. N. - 319, 885
Baranov, A. A. - 744, 966
Baranov, V. M. - 1097
Bargyalis, A. S. - 226
Bataeva, A. A. - 1080
Baumshtein, M. V. - 552, 957
Bazhenov, V. G. - 1014
Bega, N. D. - 430
Belyaev, M. S. - 300
Belokurov, V. N. - 906
Belokurov, V. P. - 459
Belov, V. K. - 360
Belyaev, A. E. - 355
Berezhnitskii, L. T. - 923
Berezin, A. V. - 484
Bilan, V. N. - 1293
Bilida, G. V. - 731
Bílý, M. - 263
Birger, I. A. - 1436
Bityutskii, Yu. I. - 210
Bobrinskii, A. P. - 8
Bobritskaya, S. D. - 327, 456
Bobrov, B. S. - 816
Bochkovskii, V. S. - 868
Bol'dt, Ya. Ya. - 881, 1014
Borisenko, V. A. - 974, 1066, 1154
Borisenko, V. A. - 107
Borisenko, Yu. M. - 469
Borishanskii, K. N. - 530
Borisov, I. A. - 40
Borisov, S. P. - 27
Borodin, A. V. - 1504
Borshchev, N. I. - 27
Bratus', Ya. A. - 465
Briskin, N. Ya. - 628
Brodskii, M. M. - 1394
Brusilovskaya, G. A. - 144
Buina, E. V. - 342
Bulygin, I. P. - 1080
Busarov, Yu. P. - 1414

C

Chebaevskii, B. P. - 881, 1014
Chebotarev, O. M. - 779
Chechko, V. N. - 518, 1511
Chekh, M. - 292
Chemeris, A. N. - 865
Chernitsyn, A. I. - 862
Chernova, O. I. - 1521
Chernyavskii, K. S. - 240
Chichenev, N. A. - 44
Cholovskii, G. É. - 731

D

Dabizha, E. V. - 278
Danilov, V. N. - 205
Dashevskii, E. M. - 939
Daunis, M. A. - 1480
Davydov, V. V. - 757
Davydov, Yu. I. - 449
Degtyarév, V. P. - 1445
Demchenko, A. D. - 97
Demchuk, I. S. - 895
Demkin, Yu. I. - 854
Dem'yanushko, I. V. - 1436
Dergunov, N. N. - 1297
Dobrynina, L. D. - 728
Dodonova, R. N. - 300
Dolgopolov, V. V. - 244
Dolgov, V. A. - 623
Draigor, N. D. - 1468
Drozd, M. S. - 63
Drozdetskaya, G. V. - 94
Drozdov, P. D. - 597
Dryukova, I. N. - 315
Dubrovina, G. I. - 1450
Dudin, A. I. - 898
Dul'nev, R. A. - 834
Dumarevskaya, N. S. - 1414
D'yakov, A. P. - 639
Dzhonov, Ts. T. - 642
Dzyuba, V. S. - 549, 752, 1418

E

Egorov, V. S. - 1217, 1354
Eliseev, A. I. - 520
Ermakov, V. P. - 360
Ershov, L. V. - 144
Éskin, É. A. - 85, 469, 1386
Evment'ev, L. A. - 32

F

Fedchuk, V. K. - 85, 307
Fedotov, M. A. - 1097
Fedyunin, V. N. - 408
Filatov, É. Ya. - 906

Filatov, M. Ya. - 1149
Filatov, V. M. - 1188
Filimonov, G. N. - 1282
Filip'ev, A. A. - 628
Finkel', V. A. - 573
Finkel', V. M. - 1018, 1211
Flyachok, V. M. - 557
Fokin, Yu. F. - 247
Fomichev, A. A. - 1336
Fortunatova, N. N. - 841
Fridman, A. M. - 996, 1297
Fridman, Ya. F. - 1325
Frolov, A. N. - 1362
Frolov, A. S. - 300
Frolov, D. I. - 1382
Furman, V. G. - 160

G

Gaiduk, V. V. - 372
Garf, M. É. - 1149
Garmash, E. P. - 1349
Gavrilyuk, M. I. - 1514
Geminov, V. N. - 1517
Georgiev, M. N. - 205
Getsov, L. B. - 623
Giantsintov, E. V. - 633
Ginesina, É. M. - 187
Girchenko, A. G. - 868
Girenko, V. S. - 342
Gladkikh, A. N. - 1004
Glagovskii, V. B. - 764
Glikman, L. A. - 523
Gnyp, I. P. - 749
Cogotsi, G. A. - 1454, 1459
Gokun, M. V. - 1188, 1526
Gol'dman, A. Ya. - 736, 872, 1390
Gol'dshtein, L. Ya. - 981
Golovanev, Yu. M. - 115, 255, 696
Golovin, S. A. - 449, 757, 1038
Gol'tsev, V. Yu. - 1426
Goncharov, L. P. - 164
Goncharyuk, I. V. - 91
Gontarovskaya, T. N. - 991
Gontarovskii, V. P. - 178, 991
Gopkalo, A. P. - 1477
Gorbach, V. G. - 849
Gordon, Kh. - 895
Goritskii, V. M. - 713, 1312
Gorodetskii, V. N. - 112
Gorodyskii, N. I. - 773, 841, 890
Gorokhov, V. E. - 378, 645
Goroshko, O. A. - 868
Gorotsi, G. A. - 169
Gribanovskii, V. K. - 103
Grigolyuk, É. I. - 1504
Grigorenko, Ya. M. - 717, 1468
Grigorkin, V. I. - 5
Grikurov, G. N. - 1531
Grin', E. A. - 8
Grinberg, N. M. - 494, 1402
Grinchenko, V. T. - 1500
Grinman, A. M. - 736
Grishko, V. G. - 1293
Gromov, V. E. - 605
Gropyanov, V. M. - 94
Grushevskii, Ya. L. - 169, 1454, 1459
Gudkov, A. A. - 701, 946
Gul', Yu. P. - 601
Gulevskii, A. S. - 601
Gulyaev, V. P. - 174
Gupta, T. K. - 540
Gurarii, V. N. - 1222
Gurevich, S. M. - 97
Gurevich, Ya. B. - 1426
Gurskii, N. G. - 508
Gusak, Ya. M. - 779
Gusel'nikov, N. Ya. - 597
Gusev, A. V. - 132
Gusev, V. V. - 360
Gus'kov, Yu. P. - 1450

H

Hasselman, D. R. N. - 535

I

Il'chenko, P. A. - 1390
Il'ichev, V. Ya. - 1101
Isakhanov, G. V. - 307, 1234
Ishchenko, A. Ya. - 773, 841
Ivanova, R. N. - 499
Ivanova, V. S. - 1312
Ivchenko, V. S. - 614

J

Jahowluk, A. - 1241

K

Kachanova, I. M. - 1115
Kagan, E. S. - 1531
Kakuevitskii, V. A. - 618
Kalna, K. - 1318
Kal'ner, D. A. - 1494
Kaminer, A. A. - 1496
Kamyshanchenko, N. V. - 636
Kanter, Yu. L. - 1032
Kantor, A. Sh. - 1139
Kaplan, A. A. - 1517
Karasev, L. P. - 798
Karasyuk, Yu. A. - 1534
Karlashov, A. V. - 216
Karnaukhov, V. G. - 164, 666, 1500
Karpenko, E. S. - 614
Karpinos, D. M. - 731, 874
Kartashov, A. M. - 523
Kasatkin, Yu. S. - 247
Kashchuk, A. I. - 1270
Kavitskii, B. M. - 1496
Kazarnovskii, D. S. - 1056
Kazenina, A. D. - 1282
Kemnits, É. A. - 229
Khaikin, S. Ya. - 872
Khaimovich, P. A. - 1291
Khannanov, Sh. Kh. - 1160
Kharchenko, V. K. - 376, 449
Kharlamov, Yu. A. - 201
Khazanov, I. I. - 27
Khokhryakova, T. P. - 1222
Kholodar', B. G. - 49
Khoroshailov, V. G. - 895
Khristenko, I. N. - 381, 1397
Khron, D. A. - 535
Kirichevskii, V. V. - 1365
Kirichok, I. F. - 666
Kirpatyi, V. A. - 749
Kiselevskii, V. N. - 378, 398, 645
Kissil', A. E. - 446
Kizima, M. V. - 728
Klimenko, I. N. - 1101
Klypin, A. A. - 23, 810
Knyazev, V. I. - 1097
Kodner, M. Ya. - 1468
Kocherovets, R. R. - 117, 1170
Kolachev, B. A. - 597
Kolesnikov, A. V. - 717
Kolomiets, N. G. - 408
Kolos, V. V. - 1297
Kolybko, E. - 1241
Kondratov, V. M. - 1112
Kontorova, T. A. - 651
Kopeliovich, B. A. - 709
Kopel'man, L. A. - 478
Kopylov, A. K. - 841
Korchagin, A. P. - 902
Korenevskii, E. Ya. - 16
Korobka, V. F. - 100
Korobov, Yu. M. - 1222
Koroleva, G. V. - 1217
Korotushenko, G. V. - 5
Korsukov, V. E. - 942
Kosarev, L. N. - 205
Koshelev, P. F. - 1001, 1119
Koshevoi, I. K. - 868
Kosov, B. D. - 383, 398
Kostina, N. A. - 205

Kosygin, É. P. - 272, 682, 1195, 1276
Kotel'nikov, Yu. P. - 1464
Kotov, P. I. - 251
Koval'chuk, B. I. - 1050
Kovalenko, I. A. - 376
Kovpak, V. I. - 151, 552, 820, 957
Kovtun, A. D. - 473
Kozhevnikov, V. F. - 364
Kozlov, I. A. - 112, 178, 991, 1022, 1142
Kozlov, P. M. - 849
Kozlovskaya, V. I. - 1531
Kozlovskaya, V. P. - 841
Kozlovskii, L. V. - 94
Kozub, Yu. I. - 793, 1168
Krashchenko, V. P. - 107, 1154
Krasnova, G. A. - 970
Krasnovskii, R. O. - 1262
Kravchuk, L. V. - 272, 682, 1195, 1276
Krishtal, M. A. - 1038
Krivenko, M. P. - 300
Krivenyuk, V. V. - 296, 769, 1255
Kribonogov, G. S. - 1115
Krol', I. S. - 1262
Kroshin, V. A. - 369, 511
Kudrin, A. B. - 44
Kudryashov, V. G. - 491, 709, 1377
Kudryavtsev, I. V. - 257, 1166
Kudryavtsev, P. I. - 1343
Kukhar', Yu. P. - 639
Kuksa, L. V. - 462
Kuksenko, V. S. - 1382
Kulakov, V. M. - 1362
Kurashevskii, A. A. - 1454, 1459
Kuriat, R. I. - 1170
Kurilo, Yu. P. - 1265
Kurits, E. A. - 981
Kurshin, L. M. - 360
Kurylev, V. F. - 337
Kushnir, A. M. - 1139
Kuzginov, V. I. - 491
Kuz'menko, V. A. - 525, 951
Kuz'min, V. R. - 174
Kuz'mina, V. S. - 55
Kuznetsova, L. M. - 5
Kvasha, A. N. - 1123
Kvitka, A. L. - 302, 327, 456, 473, 1203, 1431
Kyo, Ya. P. - 577

L

Lakeenkov, V. M. - 75
Lamashevskii, V. P. - 1373
Landau, A. I. - 608
Lanin, A. G. - 1217
Larionov, I. F. - 360
Larionov, V. P. - 174
Larionov, V. V. - 1199
Laz'ko, V. A. - 191
Laz'ko, V. E. - 515
Lebedev, A. A. - 1373, 1550
Lempitskii, V. V. - 1056
Len', M. P. - 923
Leonova, É. A. - 674
Leshchenko, V. M. - 1022, 1142
Levanov, V. I. - 862
Levin, I. B. - 1080
Levitskii, M. O. - 749
Lezvinskaya, L. M. - 1018, 1211
Li, V. - 1179
Listvinskaya, L. Kh. - 1305
Litvak, V. I. - 80
Lobov, A. F. - 523
Lomakin, E. V. - 484
Lopata, A. T. - 1487
Lozitskii, L. P. - 390
Ľubuský, P. - 263
Luchnikov, A. F. - 210
Lupashku, R. G. - 1139
Lupin, B. K. - 1349
Lupin, V. A. - 1157
Lyashenko, B. A. - 614
Lychko, I. I. - 178
Lyubarskii, I. M. - 494
Lyutyi, V. A. - 1075

M

Madyanov, S. A. - 1112
Magomaev, L. D. - 68, 323
Maistrenko, A. L. - 773, 934, 1045
Makarchenko, V. G. - 499
Makarov, E. G. - 310
Makeev, A. I. - 1336
Malashenko, I. S. - 442, 590
Malinin, V. V. - 103
Malygin, G. A. - 136
Mamchich, S. D. - 878
Markochev, V. M. - 8
Martynov, M. A. - 1390
Marussi, O. I. - 1331
Matveev, V. V. - 1270
Mazepa, A. G. - 257
Mazur, I. I. - 1521
Mazur, V. A. - 32
Medeksha, G. G. - 226
Medyanova, T. P. - 503
Mel'nikov, G. P. - 658
Merenkova, R. F. - 1001, 1119
Merinov, G. N. - 40, 1009
Merkulov, V. N. - 1491
Mezentsev, N. S. - 1237
Mikheev, V. S. - 862
Miklyaev, P. G. - 491, 709, 1377
Miloserdin, Yu. V. - 1511
Minakov, V. P. - 573, 1247
Moguchii, L. N. - 961
Moiseev, V. F. - 434
Molochnaya, T. V. - 1422
Monoshkov, A. N. - 1157
Mordyuk, V. S. - 845
Morozov, L. V. - 372
Morozova, T. I. - 1343
Movchan, B. A. - 278
Muravin, G. B. - 1018, 1211
Muz'menok, O. S. - 1123
Myadzelets, E. N. - 639
Myshlyaev, M. M. - 284

N

Nabatov, S. S. - 367
Nagibin, L. N. - 247
Nazaruk, V. B. - 1009
Nechaev, G. I. - 12
Negmatov, S. S. - 237
Neiman, E. Ya. - 1133
Neklyudov, I. M. - 636
Nekrasova, I. G. - 515
Nerodenko, M. M. - 97
Nesatyi, I. M. - 1358
Neshpor, G. S. - 709, 1377
Nguen van Dao - 1407
Nikolaev, V. P. - 1237
Nikulina, N. E. - 1061
Novikov, N. V. - 773, 841, 890, 934, 1045, 1373
Nuller, B. M. - 764

O

Obcturova, N. A. - 1547
Okhrimenko, G. M. - 563
Oleshev, S. S. - 337
Olevskii, S. S. - 284
Olisov, A. N. - 957
Ol'shanetskii, V. E. - 970
Orlov, L. G. - 713, 1312
Orlov, M. A. - 459
Osadchuk, V. A. - 798
Osasyuk, V. V. - 1195
Osoblivets, A. M. - 1027
Ostapchuk, I. I. - 1147, 1543
Ostrovskii, A. A. - 59, 345, 488
Ostrovskii, G. M. - 1521
Ovsyannikov, B. M. - 854

P

Pak, I. I. - 237
Pakhomov, P. L. - 1394
Panferov, V. M. - 674
Panteleev, V. G. - 169
Papirov, I. I. - 381, 1251, 1397
Pashchenko, A. A. - 315
Pashkov, V. A. - 915
Patsiornykh, A. I. - 687
Pavlov P. A. - 1061
Pavlovskii, V. É. - 906
Pechkovskii, E. P. - 434
Pelekh, B. L. - 191
Permin, V. N. - 1222
Petergerya, D. M. - 16
Petrenko, A. I. - 1301
Petrichenko, A. M. - 728
Petrik, V. M. - 955
Petrov, A. A. - 1022
Petrov, A. S. - 469, 1386
Pimenova, G. P. - 834
Pisarenko, G. S. - 393, 563, 769, 793, 1045, 1179, 1301, 1431
Pleskach, V. M. - 1036
Pletenetskii, G. E. - 1265
Podstrigach, Ya. S. - 798
Pod'yachev, V. N. - 1514
Pogontsev, A. V. - 376
Pokhmurskii, V. I. - 749
Pokrovskii, V. V. - 706, 859, 1184
Poleshko, A. P. - 793, 1537
Poliéktov, Yu. I. - 687
Polyak, L. Z. - 446
Polyakov, L. M. - 1247
Polyakov, V. A. - 349
Polyakov, Yu. S. - 1390
Popov, V. D. - 1237
Popov, V. M. - 459
Popov, V. P. - 1354
Potapova, V. F. - 1022, 1142
Primerov, S. N. - 220
Pukhlii, V. A. - 786

R

Rabkina, M. D. - 97
Radin, N. N. - 169
Ragutskii, I. V. - 618
Rakhman, M. Z. - 1157
Rakhshtadt, A. G. - 1377
Ramm, K. S. - 169
Rann, A. D. - 446
Revzyuk, M. B. - 1325
Rezakova, N. P. - 1133
Reznik, M. I. - 220
Rodichev, Yu. M. - 563, 1431
Rogozina, L. V. - 332, 581
Romanchenko, A. F. - 868
Romanov, A. N. - 413, 906
Romanov, N. G. - 1468
Rovinskii, B. M. - 1001
Rubashkina, Z. M - 523
Rubel', A. P. - 1
Rubenchik, Yu. I. - 369, 511
Rudenko, V. N. - 19, 425
Rudintskii, V. I. - 210
Rudnitskii, N. M. - 1146
Rudnitskii, Yu. S. - 545
Ryabov, V. R. - 749
Ryabovol, A. A. - 1022
Rybakov, S. V. - 520
Rybakova, L. M. - 1001
Rybal'chenko, N. D. - 573
Rybin, V. V. - 687
Rybina, T. V. - 834
Ryskin, V. S. - 1227
Rystsov, V. N. - 1097

S

Sadakov, O. S. - 386
Saenko, M. I. - 773, 841
Sakharov, A. S. - 1365
Sankev, Z. B. - 642
Sapelkina, Z. V. - 1179
Satanovskii, E. A. - 981
Savchenko, L. P. - 222
Savchenko, V. I. - 1521
Savchuk, A. N. - 970
Savel'ev, A. M. - 1211
Savva, S. P. - 830
Sazonov, V. V. - 216
Semenov, B. D. - 518, 1511
Senchenkov, I. K. - 1500
Senin, A. M. - 1373
Ser'eznov, A. N. - 1547
Sergeev, N. K. - 355
Shabalina, V. N. - 1126
Shabatina, O. P. - 1431
Shakhmatov, D. T. - 1027
Shalimov, Yu. A. - 182
Shaposhnikov, A. S. - 174
Shapovalov, I. A. - 1101
Shapovalov, V. N. - 222
Shatinskii, V. F. - 520
Shcherbak, V. V. - 872
Shebatinov, M. P. - 713, 961
Sherman, D. G. - 981
Shestopal, L. F. - 127
Shestopal, V. O. - 1163
Shevchenko, V. L. - 63
Shevchuk, A. D. - 115, 255
Shifrin, I. M. - 222
Shilov, S. E. - 244
Shinkar', A. I. - 1468
Shinkarenko, E. T. - 895
Shnaperman, L. Ya. - 1056
Shneiderovich, R. M. - 1188
Shokalo, I. K. - 825
Shol'tsov, V. I. - 1287
Shorshorov, M. Kh. - 201, 961
Shripnik, Yu. D. - 645
Shul'ginov, B. S. - 898
Shur, D. M. - 1166
Shurygin, V. A. - 247
Shvets, R. N. - 557
Shvetsov, A. V. - 942
Sidorenko, Yu. V. - 1414
Simonov, Yu. P. - 337
Simonyan, A. M. - 724
Sinitsyn, G. F. - 845
Sinyavskii, D. P. - 1477
Skripnik, Yu. D. - 378
Skudnov, V. A. - 503, 585
Skvortsova, N. V. - 874
Slutsker, A. I. - 1227, 1382
Smaglenko, F. P. - 100
Smirnov, A. I. - 233
Sokolov, L. D. - 503, 585
Sokolov, P. S. - 1450
Sokolovskaya, T. V. - 628
Sokovnin, Yu. P. - 1450
Solntsev, L. A. - 728
Soluyanov, V. G. - 793, 1168
Sorokin, V. G. - 1534
Spirina, N. I. - 1105
Spirina, S. I. - 1105
Spivak, I. I. - 1097
Spivakov, A. S. - 19, 376, 425
Stanyukovich, A. V. - 1325
Starkov, V. K. - 608
Starodubov, Ya. D. - 1291
Stasyuk, S. Z. - 841, 890
Stasyunas, R. A. - 1480
Stepanenko, V. A. - 706, 859
Stepanov, G. A. - 1287
Stepanov, G. V. - 1540
Stepanov, V. F. - 841
Stepnov, M. N. - 27, 633
Stratonova, M. M. - 55
Strelyaev, V. S. - 915
Strizhalo, V. A. - 1, 420, 1473
Strokov, V. I. - 319
Sudnik, V. A. - 1038
Sukhanov, Yu. V. - 372
Sul'zhenko, V. K. - 434
Sumtsov, V. S. - 222
Surkov, S. A. - 1297
Sverdlova, B. M. - 1105

T

Tamarina, I. A. 854

Tatarchuk, N. I. - 1022
Temis, Yu. M. - 1436
Terekhov, A. N. - 1422
Terent'ev, V. F. - 713, 1312
Tikhinskii, G. F. - 1251
Timofeeva, L. N. - 1080
Tinnyi, A. N. - 878
Tipikina, É. S. - 32
Titskii, V. P. - 91
Tkachenko, V. D. - 1349
Tkachenko, V. G. - 1251
Tkachev, A. L. - 1217
Tkalenko, A. D. - 1251
Tokaravskii, V. A. - 1418
Tokarev, V. P. - 216
Tokarskii, V. A. - 549, 752
Tomenko, Yu. S. - 315
Tonyuk, N. I. - 1014
Torshenov, N. G. - 825
Trantsevich, Ya. V. - 1531
Trapezon, A. G. - 393
Travushkin, G. G. - 240
Trefilov, V. I. - 434, 1251
Tresvyatskii, S. G. - 1349
Tret'yachenko, G. N. - 272, 549, 682, 1195, 1276, 1418
Trishina, L. A. - 1336
Troitskii, O. A. - 36, 804
Tron', A. S. - 573, 1247, 1487
Troshchenko, V. T. - 1, 127, 430, 1184
Troshin, V. F. - 160
Troyan, I. A. - 255, 951, 1331
Tsaits, E. S. - 1293
Tsareva, G. A. - 1547
Tsimbalistyi, Ya. I. - 525, 951, 1331
Tsoi, N. G. - 717
Tsvetaeva, T. G. - 1282
Tsvilyuk, I. S. - 452, 552
Tsybenko, A. S. - 473, 1431
Tuchinskii, L. I. - 731, 874
Tulyakov, G. A. - 658
Turchin, V. N. - 240
Turovskii, M. L. - 222
Tyalin, Yu. M. - 1018

U

Uglov, A. A. - 1517
Umanskii, É. S. - 302, 614, 731, 1032, 1089
Urbanskii, S. V. - 868
Uskov, E. I. - 1473
Uspenskii, A. A. - 1362
Ustilovskii, S. Ya. - 1146
Ustinov, L. M. - 961
Uzdalev, A. I. - 247

V

Vainberg, V. E. - 1139
Vaisbord, A. G. - 1123
Vashchenko, A. P. - 1540
Vashchilo, N. P. - 442, 590
Vashunin, A. I. - 251
Vasil'chenko, G. S. - 40, 1009
Vasil'ev, A. D. - 590
Vasil'eva, G. B. - 773
Veitsman, M. G. - 633
Veksler, Yu. G. - 1534
Velikanov, A. V. - 207
Vengzhen, V. V. - 85, 307, 469
Verber, F. G. - 12
Veselyi, G. Z. - 1027
Viktorov, B. G. - 623
Vinokurov, V. A. - 515
Virakhovskii, Yu. G. - 1426
Virgil'ev, Yu. S. - 88, 499, 885
Volkov, I. V. - 1136
Volkov, S. D. - 1450
Volkov, V. M. - 1339
Volskii, M. I. - 1422
Vorob'ev, Yu. S. - 1179
Vorona, N. I. - 1130
Vorontsov, V. K. - 44
Voroshko, P. P. - 302, 473, 1203, 1431

Y

Yakovlev, G. A. - 164
Yakovlev, P G. - 174
Yakovleva, E. V. - 744, 966
Yakovleva, V. I. - 761
Yakovlyuk, A. - 292
Yakushev, V. V. - 367
Yarema, S. Ya. - 929
Yas'kevich, T. R. - 342
Yastrebkov, A. A. - 75
Yatsenko, V. K. - 16
Yavorskaya, M. R. - 773
Yudin, A. B. - 112

Z

Zabashta, L. A. - 1487
Zaitsev, G. P. - 915
Zamesov, L. A. - 942
Zandberg, S. A. - 369, 511
Zasimchuk, E. É. - 430
Zaslotskaya, L. A. - 1203
Zayats, V. V. - 618
Zelenyuk, E. E. - 769, 1255
Zhamnova, V. I. - 961
Zhartovskii, V. F. - 1130
Zhigun, I. G. - 349
Zhukov, N. D. - 300
Zinchenko, A. I. - 420
Zobnin, A. I. - 484
Zolotov, M. A. - 585
Zonshain, E. M. - 651
Zoteev, V. S. - 701, 946

STRENGTH OF MATERIALS
Volume 7, Numbers 1-12, 1975
(A translation of Problemy Prochnosti)

Volume 7, Number 1 January, 1975

	Engl.	Russ.
SCIENTIFIC-TECHNICAL SECTION		
Effect of Low Temperatures on the Laws Governing the Deformation and Rupture of Steel 15G2AFDps during Low-Cycle Tensile Strain — V. T. Troshchenko, V. A. Strizhalo, and A. P. Rubel'	1	3
Fatigue Strength of Austenitic Manganese Steels — V. I. Grigorkin, G. V. Korotushenko, and L. M. Kuznetsova	5	8
Investigation of the Kinetics of Growth of Fatigue Cracks in Low-Strength Steels — A. P. Bobrinskii, E. A. Grin', and V. M. Markochev	8	11
Determination of the Fatigue Strength of Flat Duralumin D16 Specimens — F. G. Verber and G. I. Nechaev	12	15
Effect of Diamond Burnishing on the Corrosion-Fatigue Strength of Steel ÉI961 and Alloy ÉI437B — V. K. Yatsenko, E. Ya. Korenevskii, and D. M. Petergerya	16	19
The Effect of Cyclic Loading on the Mechanical Properties of 16GNMA Steel — V. N. Rudenko and A. S. Spivakov	19	22
The Strengthening of Dispersion Hardening Alloys by Preliminary Creep — A. A. Klypin	23	26
Unsteady Creep and Stress Relaxation of AK4-1 Alloy in the Probability Aspect — S. P. Borisov, N. I. Borshchev, M. N. Stepnov, and I. I. Khazanov	27	30
The Creep and Relaxation Resistance of $Bi_{2.0}Te_{2.4}Se_{0.6}$ Alloy — L. A. Evment'ev, V. A. Mazur, and É. S. Tipikina	32	34
The Effect of Additional Plastification of Irradiated Metal with Current Pickup — O. A. Troitskii	36	38
Brittle-Fracture Susceptibility of Heavy Forgings of Electroslag-Remelted and Siemens—Martin (Open Hearth) Steels — G. S. Vasil'chenko, G. N. Merinov, and I. A. Borisov	40	42
The Use of Grating Diffraction Properties in the Moiré Method — N. A. Chichenev, A. B. Kudrin, and V. K. Vorontsov	44	46
The Relationship of Crack Formation to the Stress Deformed Condition of a Material — B. G. Kholodar'	49	51
Changes in the Vibration Spectrum of a Cracking Plate — M. M. Stratonova and V. S. Kuz'mina	55	57
On the Limiting State of Material as Judged by a Criterion Based on the Appearance of Local Layers of Yield — A. A. Ostrovskii	59	61
Intensity of Elastoplastic Deformation during the Penetration of a Spherical Elastic Stamp into the Plane Face of a Steel Body — M. S. Drozd and V. L. Shevchenko	63	65
Kinematic Relationships in the Theory of Rods in Torsion and Bending — L. D. Magomaev	68	69
The Mechanical Properties of Molybdenum Bicrystals — A. A. Yastrebkov and V. M. Lakeenkov	75	75
PRODUCTION SECTION		
The Use of Vibrostands under Autooscillation Conditions for Full Scale Tests — V. I. Litvak	80	81
Measurement of the Deflection Function for a Circular Orthotropic Plate — V. V. Vengzhen, V. K. Fedchuk, and É. A. Éskin	85	87

Engl./Russ.

The Radiation Hardening of Carbonaceous Materials — Yu. S. Virgil'ev..... 88 90
R-Function Solution of Torsion Problems for Anisotropic Rods of Complex Cross Section — I. V. Goncharyuk and V. P. Titskii..... 91 92
Effect of Porosity on Strength Characteristics of Sintered Corundum — V. M. Gropyanov, G. V. Drozdetskaya, and L. V. Kozlovskii..... 94 94
Impact Toughness of Welding Joints of Niobium Alloys — E. A. Asnis, S. M. Gurevich, A. D. Demchenko, M. M. Nerodenko, and M. D. Rabkina 97 97
Residual Stresses and the Cyclic Strength of 12KhN3A Steel in Diamond Belt Grinding — F. P. Smaglenko and V. F. Korobka..... 100 100
Vibration-Acoustic Method of Flaw Detection in Strength Tests — V. K. Gribanovskii and V. V. Malinin..... 103 102
An Installation for High-Temperature Testing of Strength of Materials by Microhardness and Tension-Compression Methods — V. A. Borisenko and V. P. Krashchenko 107 106
Bench for Testing Disks over a Wide Range of Temperatures, Employing Programmed Loading — I. A. Kozlov, V. N. Gorodetskii, V. L. Akhremenko, and A. B. Yudin 112 111
Device for Calculating the Probability Distribution of Random Oscillations — Yu. M. Golovanev and A. D. Shevchuk..... 115 114

CHRONICLES
Dissertations on Strength of Materials and Structural Elements Defended in 1973 by Members of Staff of the Institute of Strength of Materials, Academy of Sciences of the Ukrainian SSR — R. R. Kocherovets 117 116

Volume 7, Number 2 February, 1975

SCIENTIFIC AND TECHNICAL SECTION
Criteria of Torsional Fatigue Strength of Metals — V. T. Troshchenko and L. Sh. Shestopal..... 127 3
Thermoelastic Stress and Temperature Waves Produced by a Finite-Duration Electromagnetic Pulse — A. V. Gusev..... 132 8
Analysis of the Mechanism of Spasmodic Deformation — G. A. Malygin..... 136 12
Response of a Hollow Elastic Thick-Walled Cylinder to a Dynamic Load of General Form — G. A. Brusilovskaya and L. V. Ershov..... 144 19
The Comparability of the Characteristics of Long Time Strength Determined with Extrapolation by a Method of Generalized Diagrams — V. I. Kovpak 151 24
Some Rules for the Distribution of the Strength of Constructional Glass — V. G. Furman and V. F. Troshin..... 160 32
Self-Heating of Viscoelastic Materials under Cyclic Loads — V. G. Karnaukhov, G. A. Yakovlev, and L. P. Goncharov..... 164 36
Heat Resistance of Materials Containing Carborundum — G. A. Gorotsi, Ya. L. Grushevskii, V. G. Panteleev, N. N. Radin, and K. S. Ramm 169 40
Determining the Fracture Toughness of Welds in Sheet Steel — V. P. Gulyaev, V. P. Larionov, V. R. Kuz'min, A. S. Shaposhnikov, and P. G. Yakovlev 174 45
Investigation of the Strength of Bimetal Joints — I. A. Kozlov, M. M. Aleksyuk, V. P. Gontarovskii, and I. I. Lychko 178 49
Influence of Anisotropy on the Susceptibility of Steels to Brittle Fracture after a Welding Heating Cycle — Yu. A. Shalimov and A. S. Zubchenko..... 182 53
Carrying Capacity of an Orthotropic Rectangular Plate of PPN Glass-Fiber Material in Transverse Bending — É. M. Ginesina 187 59
Some Features of a Calculation on the Strength of Transversely Isotropic Slabs Weakened by Holes and Only Weakly Resisting Shear — B. L. Pelekh and V. A. Laz'ko..... 191 62
Propagation of a Load Pulse in Rods Manufactured from an Elastic-Viscous-Plastic Material with Linear Strengthening — G. V. Stepanov 195 65

Engl./Russ.

Influence of the Temperature of Metal Particles on Impact with Solid Obstacles — M. K. Shorshorov, and Yu. A. Kharlamov 201 70

PRODUCTION SECTION

The Brittle Failure of the Casings of Railroad Rolling Stock Automatic Couplers — M. N. Georgiev, V. N. Danilov, L. N. Kosarev, and N. A. Kostina 205 73

Effect of Strength and Structure on Resistance to Brittle Fracture of Low-Alloy Steels — A. V. Velikanov and A. P. Babich 207 75

The Results of Comparative Fatigue Strength Tests of the Flexible Rings of Two Wave Drives — V. I. Rudintskii, A. F. Luchnikov, and Yu. I. Bityutskii 210 78

Resistance of Duralumin D16T To Fatigue Fracture at Normal and Elevated Temperatures Depending on Speed of Cyclic Loading rlashov, V. V. Sazonov, and V. P. Tokarev 216 84

Fatigue Testing of Cast Steel 40KhNML Test Pieces — S. N. Primerov, M. I. Reznik, and Yu. Z. Babaskin. 220 88

Some Problems of Fatigue Strength in a Press-Fitted Shaft—Sleeve Joint — L. P. Savchenko, V. S. Sumtsov, M. L. Turovskii, V. N. Shapovalov, and I. M. Shifrin 222 90

The Use of a Deformation Kinetic Criterion for Totalling Long Time Cyclic Damage — A. S. Bargyalis and G. G. Medeksha. 226 94

Design of the Sealing Shell in Large Composite Pressure Vessels — É. A. Kemnits . . . 229 96

Operation of Bound Vessels under Internal Pressure — A. I. Smirnov 233 100

The Effect of Plasticizing on the Shock-Absorbing Capacity of Epoxy Compositions — S. S. Negmatov and I. I. Pak 237 103

Relationship between the Structure and Controlled Failure Characteristics of Some Hard Alloys — G. G. Travushkin, K. S. Chernyavskii, and V. N. Turchin 240 105

Determination of the Stress-Intensity Coefficients in Cracked Structures by the Photoelastic Method — V. V. Dolgopolov and S. E. Shilov 244 108

Study of the Properties of Tungsten Coatings Produced by Vapor-Phase Deposition — Yu. S. Kasatkin, L. N. Nagibin, A. I. Uzdalev, Yu. F. Fokin, and V. A. Shurygin. 247 111

A Tracing System for Compensating the Thermal Deformation in Thermocyclic Loading — P. I. Kotov and A. I. Vashunin. 251 115

A Sensor for Measuring the Amplitude of High Frequency Mechanical Oscillations — I. A. Troyan, A. D. Shevchuk, and Yu. M. Golovanev. 255 119

CHRONICLES

The Czechoslovak Conference on the Fatigue and Life of Machine Parts and Designs (Czechoslovak SSR) — I. V. Kudryavtsev and A. G. Mazepa 257 121

Volume 7, Number 3 March, 1975

SCIENTIFIC AND TECHNICAL SECTION

Fractography of Fatigue Failures — P. Ľubušký and M. Bílý. 263 3

Laws Governing Changes Taking Place in the Chemical Composition of the Surface Layers of Turbine Blades during Active Service — G. N. Tret'yachenko, É. P. Kosygin, and L. V. Kravchuk 272 12

A Phenomenological Model for High-Temperature Creep in Pure Nickel — B. A. Movchan and E. V. Dabizha 278 17

Effect of the Degree of Splitting of the Dislocations on the Creep of FCC Metals at Moderate Temperatures under High Stresses — M. M. Myshlyaev and S. S. Olevskii 284 24

Creep and Relaxation Resistance of Electrical Composition Board in Oil at 80°C — A. Yakovlyuk and M. Chekh 292 32

Peculiarities of Time Changes in Generalized Diagrams of the Relationship of Short Time Mechanical Characteristics to Long Time Ones — V. V. Krivenyuk. 296 36

	Engl.	Russ.
Fatigue Strength of Heat-Resisting Alloys with Vitreous Coatings — M. S. Belyaev, B. N. Barabanov, R. N. Dodonova, N. D. Zhukov, M. P. Krivenko, and A. S. Frolov.	300	40
On the Problem of Automating the Specification of Information in the Finite Element Method — P. P. Voroshko, A. L. Kvitka and É. S. Umanskii	302	42
Regularities in the Weakening of Reinforced Plastics Exposed to One-Sided Heating during Bending — G. V. Isakhanov, V. V. Vengzhen, and V. K. Fedchuk	307	47
Estimating the Influence of Stress Concentration on the Endurance Limit of Steels at Low Temperatures — E. G. Makarov	310	50
Strengthening Effect in Layer-Like Materials in the Region of Anomalously High Uniform Deformation — Yu. S. Tomenko, I. N. Dryukova, and A. A. Pashchenko	315	55
The Strength of Graphite Subjected to Stress Concentrations — V. I. Strokov and V. N. Barabanov	319	58
Some Results of an Investigation of the Oscillations of Curved and Twisted Rods — L. D. Magomaev	323	61
Investigation of the Stress State of Solid and Thick-Walled Bodies of Rotation under the Influence of Localized Loads — S. D. Bobritskaya and A. L. Kvitka	327	65
Using Optically Sensitive Coatings to Study Stress Concentration in the Region of Eccentrically Disposed Holes in Rapidly Rotating Disks under Elasticoplastic Deformation. Communication I. Method and Results of Determination of Stress and Strain Concentration Factors — L. V. Rogozina	332	70
The Load-Carrying Capacity of Circular Compound Plates — S. S. Oleshev, Yu. P. Simonov and V. F. Kurylev	337	75
Determining the Critical Opening of Cracks — E. V. Buina, V. S. Girenko, and T. R. Yas'kevich	342	79
Study of the Effect of Preliminary Deformation on the Anisotropy and Mechanical Properties of Steel — A. A. Ostrovskii	345	81
Assessment of Thermal Stresses in Boron Fibers — V. A. Polyakov and I. G. Zhigun	349	85
Stressed—Deformed State of Rotating Discs and Beak-Shaped Rotors Studied by Means of Electrotensometry — N. K. Sergeev, A. V. Anfilof'ev, and A. E. Belyaev	355	90
The Effect of Short Time Creep on the Resistance of Smooth and Waffle Surface Cylindrical Casings — L. M. Kurshin, V. K. Belov, V. V. Gusev, V. P. Ermakov, and I. F. Larionov	360	95
Stresses in the Fillet at the Joint between the Shaft and the Disk in Turbine Rotors — V. F. Kozhevnikov	364	98
An Apparatus for Shock-Wave Experiments — S. S. Nabatov and V. V. Yakushev	367	101
Effect of Notch Sharpness on Ductile—Brittle Temperature of Highly Alloyed High-Strength Steel for Welded Structures — S. A. Zanberg, V. A. Kroshkin, and Yu. I. Rubenchik	369	103
Cyclic Strength of a Composite Sheet Reinforced by Tungsten — V. V. Gaiduk, L. V. Morozov, and Yu. V. Sukhanov	372	106
Device for Measuring Deformations at High Temperatures — V. K. Kharchenko, A. S. Spivakov, A. V. Pogontsev, and I. A. Kovalenko	376	110
A Loading Unit for Investigating the Low Cycle Fatigue of Materials under the Conditions of Reactor Radiation — V. N. Kiselevskii, Yu. D. Skripnik, and V. E. Gorokhov	378	112
BRIEF COMMUNICATIONS		
The Nature of the Initial Strain-Hardening Stage in Beryllium — I. N. Khristenko and I. I. Papirov	381	115
CHRONICLES		
All-Union Conference on Radiation Effects in Changes in the Mechanical Properties of Structural Materials and Methods of Studying Them — B. D. Kosov	383	117
All-Union Symposium on Low-Cycle Fatigue at Elevated Temperatures — O. S. Sadakov	386	119

BOOK REVIEWS

G. S. Pisarenko, N. S. Mozharovskii, and E. A. Antipov. The Resistance of High Temperature Strength Materials to Nonstationary Force and Temperature Action — Reviewed by L. P. Lozitskii 390 123

Volume 7, Number 4 April, 1975

SCIENTIFIC AND TECHNICAL SECTION

Determination of the Fatigue Strength of Materials under Plane Stress State Conditions — G. S. Pisarenko and A. G. Trapezon 393 3

Equation of State for Creep of Strain-Hardening Materials — V. N. Kiselevskii and B. D. Kosov 398 8

Rapid Determination of Endurance Limit — V. N. Fedyunin and N. G. Kolomiets 408 17

Accumulation of Damage under Low-Cycle Load — A. N. Romanov 413 21

The Effect of Low Temperature on the Cyclic Creep and Life of Aluminum Alloys in Low Cycle Fatigue — V. A. Strizhalo and A. I. Zinchenko 420 28

Effect of Cyclic Loading on the Mechanical Characteristics of 16GNMA Steel, Allowing for Temperature — V. N. Rudenko and A. S. Spivakov 425 33

The Nature of the Structural Imperfections in the Alternate Extension and Compression of Molybdenum Single Crystals — V. T. Troshchenko, E. É. Zasimchuk, and N. D. Bega 430 38

Dispersion Hardening of Niobium with Zirconium Nitride — O. I. Ban'kovskii, V. F. Moiseev, É. P. Pechkovskii, V. K. Sul'zhenko, and V. I. Trefilov 434 42

Temperature Sensitivity of the Yield Strength of Low-Alloy Molybdenum Alloys — I. S. Malashenko and N. P. Vashchilo 442 50

Choice of a Getter for the High-Temperature Mechanical Testing of Niobium and Its Alloys — L. Z. Polyak, A. D. Rann, A. G. Arakelov, and A. E. Kissil' 446 54

Study of the Mechanical Properties of Molybdenum Alloyed with Hafnium — S. A. Golovin, V. K. Kharchenko, Yu. I. Davydov, and Yu. P. Babkin 449 57

Assessment of Various Methods of Extrapolating the Long-Term (Creep) Strength of Refractory Metals and Alloys — I. S. Tsvilyuk 452 60

Example of the Action of Local Loads on Uniform and Thick-Walled Bodies of Revolution — S. D. Bobritskaya and A. L. Kvitka 456 63

Correlation of the Strength and Thermal Conductivity of Adhesive Joints — V. M. Popov, M. A. Orlov and V. P. Belokurov 459 66

Micromechanism of the Formation of Strength and Plastic Properties of Steel as a Function of Structure — L. V. Kuksa 462 69

Effects of Fastening Looseness on Vibration Damping in Rod Bundles — Yu. A. Bratus' 465 72

Some Special Features of the Mechanism Responsible for Softening of Reinforced Plastics During Heating — É. A. Éskin, A. S. Petrov, V. V. Vengzhen, and Yu. M. Borisenko 469 76

Investigation into Heating Conditions of Plates during Thermomechanical Bending — P. P. Voroshko, A. L. Kvitka, A. D. Kovtun, and A. S. Tsybenko 473 80

Accuracy in Determining the Stress Field at a Crack Tip by the Linear Fracture Mechanics Method — L. A. Kopel'man 478 84

Finding the Fracture Toughness Characteristics of Graphite Materials in Plane Strain — E. V. Lomakin, A. I. Zobnin, and A. V. Berezin 484 89

Effect of Preliminary Plastic Strain on the Modulus of Elasticity of Steel — A. A. Ostrovskii 488

Shape of Surface Crack as a Function of Various Cyclic Load Parameters — V. I. Kuzginov, V. G. Kudryashov, and P. G. Miklyaev 491

Effect of Vacuum on Various Stages of Fatigue at High and Low Strain Amplitudes — A. I. Alekseev, N. M. Grinberg, and I. M. Lyubarskii 494

Engl./Russ.

On the Hardness of Carbon Materials — Yu. S. Virgil'ev, R. N. Ivanova, and V. G. Makarchenko. 499 102

PRODUCTION SECTION

Plasticity of Copper in Relation to Purity, Temperature, and Strain Rate — V. A. Skudnov, T. P. Medyanova, and L. D. Sokolov 503 105

A Strain-Gauge Method of Determining Thermal Expansion Coefficients — N. G. Gurskii 508 109

Effect of Several Technological Factors on Cold Resistance of Steels 10G2FR and 09G2S — S. A. Zandberg, V. A. Kroshkin, and Yu. I. Rubenchik 511 111

Resistance to Fracture of Welded Joints of Medium-Alloy Steels — I. G. Nekrasova, V. A. Vinokurov, and V. E. Laz'ko 515 115

Finding the Temperature of Transition to the Brittle State in Torsion Tests — V. N. Chechko, B. D. Semenov, and E. A. Averchenkov 518 118

BRIEF COMMUNICATIONS

Structural Changes in Columbium Alloy in Creep Tests in Vacuo — S. V. Rybakov, V. F. Shatinskii, and A. I. Eliseev. 520 120

The Modulus of Normal Elasticity of Cementite — L. A. Glikman, A. M. Kartashov, Z. M. Rubashkina and A. F. Lobov. 523 123

Volume 7, Number 5 May, 1975

SCIENTIFIC-TECHNICAL SECTION

Energy Dissipation in Longitudinally Vibrating Metallic Rods Stressed Statically in Compression or Tension — V. A. Kuz'menko and Ya. I. Tsimbalistyi. 525 3

The Dissipation of Energy in the Oscillations of the Rotating Blades of the Last Stage of a Power Steam Turbine — K. N. Borishanskii. 530 9

Investigation of the Resistance of Strengthened Alumina to Thermal Stresses — D. A. Khron and D. R. N. Hasselman 535 14

Thermal Damage of Alumina in Relation to the Grain Size — T. K. Gupta 540 19

Unsteady Thermal Stresses Developing during the Chilling of Amorphous Bodies — Yu. S. Rudnitskii 545 24

Distribution of Gas Pressure in Unevenly Heated Reinforced Plastic with One-Sided Pressure — G. N. Tret'yachenko, V. S. Dzyuba, and V. A. Tokarskii. 549 27

A Universal Program for the Approximation of the Results of Long-Term Tests — V. I. Kovpak, I. S. Tsvilyuk, and M. V. Baumshtein 552 30

Shock Heating of an Orthotropic Cylindrical Shell — R. N. Shvets and V. M. Flyachok . 557 35

Method of Testing Brittle Materials such as Glasses and Sitals under Conditions of Biaxial Compression — G. S. Pisarenko, G. M. Okhrimenko, and Yu. M. Rodichev. 563 40

Strength of Thin Metal Interlayers in Composites — A. S. Tron', V. A. Finkel', N. D. Rybal'chenko, and V. P. Minakov. 573 50

Determination of Residual Stresses in Coatings of Rigidly Clamped Rods and Plates by Measuring Strain — Ya. P. Kyo. 577 53

Using Optically Sensitive Coatings to Study Stress Concentration in the Region of Eccentrically Disposed Holes in Rapidly Rotating Disks under Elasticoplastic Deformation. Communication II. Determining the Stress—Strain State by Photoelasticity Measurements — L. V. Rogozina 581 56

Effect of Temperature, Strain Rate, and Stress on Ductility of Alloy OT4-1 — V. A. Skudnov, M. A. Zolotov, and L. D. Sokolov. 585 60

The Nature of the Failure of Polycrystalline Molybdenum in the Temperature Range of the Ductile—Brittle Transition — I. S. Malashenko, A. D. Vasil'ev, and N. P. Vashchilo 590 65

The Nature of Hydride Brittleness in Titanium and α-Titanium Alloys — B. A. Kolachev, P. D. Drozdov, and N. Ya. Gusel'nikov 597 71

Engl./Russ.

Notch Sensitivity and Fracture Toughness of Thermally Toughened Round Rolled Sections — Yu. P. Gul' and A. S. Gulevskii 601 75
Effect of Temperature on Stress Relaxation in NaCl Crystals — L. B. Zuev and V. E. Gromov 605 79
Weakening of Polycrystalline Structural Materials as a Result of Plastic Deformation in Electrochemical Surface Polishing — V. K. Starkov and A. I. Landau 608 82

INDUSTRIAL SECTION
Strain Gauge Measurements with Vacuum Condensate Films Deposited Directly on the Measured Object — V. S. Ivchenko, E. S. Karpenko, E. S. Umanskii, and B. A. Lyashenko 614 88
Toughening of Reconditioned Automobile Engine Crankshafts — V. A. Kakuevitskii, I. V. Ragutskii, and V. V. Zayats 618 93
Causes of Damage to Gas Entry Ducts during Operation in Marine Gas Turbine Installations — B. G. Viktorov, L. B. Getsov, and V. A. Dolgov 623 98
Effect of Low Temperatures on the Fatigue Strength of High-Duty Wire and Cable — A. A. Filip'ev, N. Ya. Briskin, and T. V. Sokolovskaya 628 103
Assessing the Fatigue Resistance of High-Duty Structural Materials — M. G. Veitsman, E. V. Glatsintov, and M. N. Stepnov 633 108
Strengthening of Pure Metals by Quenching and Strain Aging — N. V. Kamyshanchenko and I. M. Neklyudov 636 111
The Effect of Fillets on the Static Tensile and Torsional Strength of Some Machine Construction Metals — E. N. Myadzelets, A. P. D'yakov, and Yu. P. Kukhar' ... 639 114
A Unit for Experimentally Determining the Life of Cylindrical Samples under the Combined Action of Cyclic Normal Stresses and Constant or Variable Tangential Stresses under Conditions of Increased Temperatures — Z. B. Sankev and Ts. T. Dzhonov 642 117
An Apparatus for Studying the Cyclic Elastic—Plastic Deformation of Materials under Reactor Irradiation — V. N. Kiselevskii, Yu. D. Shripnik, and V. E. Gorokhov .. 645 119

CHRONICLES
Serafim Nikolaevich Zhurkov, on the Occasion of His Seventieth Birthday 649 123

Volume 7, Number 6 June, 1975

SCIENTIFIC-TECHNICAL SECTION
Effect of Lattice Vibration Anharmonicity on Plastic Deformation — T. A. Kontorova and E. M. Zonshain 651 3
A Calculated Determination of the Life of Elements of Stationary Power Equipment under Combined Loading — G. A. Tulyakov and G. P. Mel'nikov 658 9
Thermomechanical Behavior of Viscoelastic Solids with Temperature-Independent Properties Subjected to Cyclic Loadings — V. G. Karnaukhov and I. F. Kirichok ... 666 16
A Solution of the Problems of Thermal Elasticity with Variable Moduli — V. M. Panferov and É. A. Leonova 674 22
Kinetics of Fracture of Gas Turbine Blades under the Influence of Thermal Cyclic Loads in a Gas Flow with Sulfur Compounds — G. N. Tret'yachenko, L. V. Kravchuk, and É. P. Kosygin 682 28
Singularities of the Fracture of High-Strength Cast Steels in Low-Endurance Fatigue — V. V. Rybin, A. I. Patsiornykh, and Yu. I. Poliéktov 687 32
Method of Studying the Conditions of Fatigue-Crack Propagation in Sheet Specimens during High-Frequency Bending — Yu. M. Golovanev 696 40
Effect of Frequency of Static-Load Application on Rate of Fatigue-Crack Propagation — A. A. Gudkov and V. S. Zoteev 701 44
The Effect of the Loading Conditions and the Test Temperature on the Laws Governing the Development of Fatigue Cracks in Steel 15G2AFDps — V. V. Pokrovskii and V. A. Stepanenko 706 48

Fractographic Features of the Failure of Aluminum Alloys under Conditions of Plane Stress – P. G. Miklyaev, B. A. Kopeliovich, G. S. Neshpor, V. G. Kudryashov, and G. A. Bakhtinova 709 51
The Development of Fatigue Cracks in Armco Iron at Low Temperatures – V. M. Goritskii, V. F. Terent'ev, L. G. Orlov, V. P. Balov, and M. P. Shebatinov. 713 54
Strength and Deformability of Reinforced Plastic Mine Pipes during Long-Time Loading – Ya. M. Grigorenko, A. V. Kolesnikov, and N. G. Tsoi 717 58
Creep in Steel Kh18N10T Subjected to Large Deformations – A. M. Simonyan 724 63
Effect of Heat Treatment on Long-Term Strength of Magnesium Cast Iron – L. A. Solntsev, M. V. Kizima, A. M. Petrichenko, and L. D. Dobrynina..... 728 67
Some Special Features in the Deformation of Carbon-Fiber Reinforced Plastics – É. S. Umanskii, D. M. Karpinos, L. I. Tuchinskii, G. V. Bilida, A. E. Babenko, Yu. B. Askochenskii, and G. É. Cholovskii..... 731 70
Deformation of PTFE in Simple Planar Loading – A. Ya. Gol'dman and A. M. Grinman ... 736 74
Deformation of Composite Material during Alternate Heating and Cooling. Report 1 – F. P. Banas, A. A. Baranov, and E. V. Yakovleva..... 744 82
Effect of Soft-Layer Thickness on the Mechanical Properties of Aluminum–Steel Welded Joints – I. P. Gnyp, M. O. Levitskii, V. I. Pokhmurskii, V. R. Ryabov, and V. A. Kirpatyi..... 749 87
Device for Testing the Bearing Capacity of Shells under Unilateral Heating and Combined Loading Conditions – V. S. Dzyuba and V. A. Tokarskii..... 752 89
The Effect of the Amount of Static Deformation on Damping of Ultrasonic Waves in Metals – S. A. Golovin and V. V. Davydov..... 757 93
Twisting of a Rectangular Rod Consisting of Two Elastic Materials – V. I. Yakovleva .. 761 97
Torsion of an Elastic Cylinder Joined to a Thin-Walled Tube – V. B. Glagovskii and B. M. Nuller 764 100

INDUSTRIAL SECTION

Vacuum Apparatus for Study of the Creep and Long-Term-Strength Characteristics of Materials at High Temperatures – G. S. Pisarenko, E. E. Zelenyuk, and V. V. Krivenyuk..... 769 104
Effect of Cryogenic Temperatures on Mechanical Properties of Experimental Alloys of the AMg6N Type – A. Ya. Ishchenko, M. I. Saenko, M. R. Yavorskaya, G. B. Vasil'eva, N. V. Novikov, N. I. Gorodyskii, and A. L. Maistrenko..... 773 108
Strength Optimization of the Enclosed Wheels of Centrifugal Compressors with Nonradial Blades – Ya. M. Gusak and O. M. Chebotarev 779 113
Analysis of the Stressed–Strained State of the Rotating Blades of Centrifugal Blowers Made of Anisotropic Materials – V. A. Pukhlii 786 120

Volume 7, Number 7 July, 1975

SCIENTIFIC-TECHNICAL SECTION

Determining the Strength of Brittle Materials by Means of Fracture-Surface Studies – G. S. Pisarenko, Yu. I. Kozub, V. G. Soluyanov, and A. P. Poleshko..... 793 3
Approximate Calculation of Residual Welding Stresses in Cylindrical Shells – Ya. S. Podstrigach, V. A. Osadchuk, and L. P. Karasev 798 8
Characteristics of the Plastic Deformation of a Metal during Passage of an Electric Current – O. A. Troitskii..... 804 14
Plastic Deformation of Metals in the Presence of Electric Influences – A. A. Klypin .. 810 20
Criteria of Long-Run Strength – B. S. Bobrov..... 816 27
Predicting Creep Deformation of Heat-Resistant Metals – V. I. Kovpak..... 820 31
The Vibrocreep of a Titanium Alloy – I. K. Shokalo and N. G. Torshenov 825 36
Creep of Some Structural Materials at Low Temperatures – S. P. Savva 830 41
Structural Indications of Thermal-Fatigue Damage – R. A. Dul'nev, T. V. Rybina, and G. P. Pimenova..... 834 45

Mechanical Properties of Weldable Aluminum Alloys of the 1201 Type at Low Temperatures – A. Ya. Ishchenko, M. I. Saenko, N. N. Fortunatova, N. V. Novikov, N. I. Gorodyskii, S. Z. Stasyuk, V. P. Kozlovskaya, V. F. Stepanov, and A. K. Kopylov 841 53
The Cyclic Strength of Tungsten at High Temperatures – V. S. Mordyuk and G. F. Sinitsyn 845 57
Changes in the Structure of Iron during Cyclic Deformation at Stresses above the Yield Strength – V. G. Gorbach, Yu. A. Avetisyan, and P. M. Kozlov 849 61
Resistance to Rupture and Fracture Character of Construction Steel in a Very Strong State after Refining Remelting – Yu. I. Demkin, B. M. Ovsyannikov, and I. A. Tamarina 854 66
The Shape of a Developing Fatigue Crack in Circular Specimens Subjected to Repeated Circular Bending – V. V. Pokrovskii and V. A. Stepanenko 859 71
Structural Characteristics of Fractures in Titanium Alloys Containing β-Stabilizers – V. I. Levanov, V. S. Mikheev, and A. I. Chernitsyn 862 74
Stability of Shells of Oval Cross Section under External Pressure – A. N. Chemeris .. 865 78
Experimental Study of the Stability and Stress–Strain State of Three-Layer Fiberglass Shells under Hydrostatic Pressure – V. S. Bochkovskii, A. G. Girchenko, O. A. Goroshko, I. K. Koshevoi, A. F. Romanchenko, and S. V. Urbanskii 868 81
The Hypothesis of Equivalent Cumulative Damage in Studying the Long-Term Strength of Polymers at Various Temperatures – A. Ya. Gol'dman, V. V. Shcherbak, and S. Ya. Khaikin 872 85
Mechanical Properties of Plastics Reinforced with Silicon Carbide – D. M. Karpinos, L. I. Tuchinskii, Yu. B. Askochenskii, and N. V. Skvortsova 874 87
Determining the Safe Stress for Rigid Polymers – S. D. Mamchich and A. N. Tinnyi .. 878 90
Determining the Stresses in Centrifugal Compressor Wheel Blades by Hardness Measurement – Ya. Ya. Bol'dt and B. P. Chebaevskii 881 92
Mechanism of the Fracture of Graphitic Materials – Yu. S. Virgil'ev and V. N. Barabanov 885 96

PRODUCTION SECTION

Methodology for Destructive Tensile Testing of Metals at Very Low Temperatures – N. V. Novikov, N. I. Gorodyskii, and S. Z. Stasyuk 890 101
Mechanical Properties of Austenitic Steels 1Kh18N9T and 4Kh12N8G8MFB in Relation to Low-Temperature Plastic Deformation – E. T. Shinkarenko, V. G. Khoroshailov, I. S. Demchuk, N. P. Antropov, and Kh. Gordon. 895 107
Procedure Suited for Testing the Strength of Welded Connections under Repeated Impact Loads – B. S. Shul'ginov and A. I. Dudin 898 110
A Study of the Plastic Properties of Steel in Various Stressed States after Holding in Media Conducive to Hydrogen Absorption – A. P. Korchagin 902 114
Machine for High-Temperature Fatigue Testing of Specimens under Axial Loading – É. Ya. Filatov, V. É. Pavlovskii, A. N. Romanov, and V. N. Belokurov 906 118

CHRONICLES

For the 70th Birthday of Academician Sergei Vladimirovich Serensen 909 121
Fourth All-Union Conference on Theoretical and Applied Mechanics 912 123

Volume 7, Number 8 August, 1975

SCIENTIFIC AND TECHNICAL SECTION

Probabilistic Evaluation of the Criteria of Static Strength of Reinforced Plastics – G. P. Zaitsev, V. A. Pashkov, and V. S. Strelyaev..... 915 3
Antiplanar Deformation of a Body containing Rigid Inclusions – L. T. Berezhnitskii and M. P. Len' 923 10
Stabilization of Stresses near the Top of a Growing Crack (Procedure Suited for Investigating Slow Rupturing) – S. Ya. Yarema..... 929 15

	Engl.	Russ.
Experimental Study on the Subcritical Growth of a Crack in Thin Sheets — N. V. Novikov and A. L. Maistrenko	934	19
Numerical Analysis of Crack-Growth Conditions in Ductile Metals — E. M. Dashevskii	939	23
Role of Local Stresses in the Rupture of Polymers — L. A. Zamesov, V. E. Korsukov, and A. V. Shvetsov	942	26
Effect of Stress Level on Fatigue-Crack Growth during Symmetric Bending of Rotating Specimens — A. A. Gudkov and V. S. Zoteev	946	30
Effect of High-Frequency Loading Asymmetry on the Fatigue and Energy Dissipation in Heat-Resistant Alloys — V. A. Kuz'menko, I. A. Troyan, and Ya. I. Tsimbalistyi	951	35
Effect of Heat Treatment and Stress Concentration on a Low-Cycle Fatigue Curve — V. M. Petrik	955	39
Laws Governing the Accumulation of Creep Deformation in Nickel-Base Alloys over a Wide Range of Temperatures and Stresses — V. I. Kovpak, M. V. Baumshtein, and A. N. Olisov	957	41
Investigation of the Failure in Tension of an Aluminum Alloy Reinforced with Steel Wire — M. Kh. Shorshorov, L. N. Moguchii, L. M. Ustinov, V. I. Zhamnova, and M. P. Shebatinov	961	45
Deformation of a Composite Material during Thermocycling. II. — A. A. Baranov and E. V. Yakovleva	966	50
Strength Characteristics of EI435-Molybdenum (or Tungsten) Filament Composites with an Alloyed Contact Zone — A. N. Savchuk, V. E. Ol'shanetskii, and G. A. Krasnova	970	54
General Considerations Governing the Change in Mechanical Properties of Refractory Materials in Relation to Temperature. Part 1 — V. A. Borisenko	974	58
Change in the Amplitude-Dependent Internal Friction of Steels with Different Methods of Deformation Strengthening — M. A. Balter, L. Ya. Gol'dshtein, E. A. Kurits, E. A. Satanovskii, and D. G. Sherman	981	64
Propagation of Plane Waves in a Viscoplastic Material with Linear Strain Hardening — G. V. Stepanov	986	68
Stress and Strain Calculations on Inhomogeneous Bodies of Rotation by Finite-Element Methods — V. P. Gontarovskii, I. A. Kozlov, and T. N. Gontarovskaya	991	72
Effects of State of Stress on the Scale Effect and Strength-Limit Distribution for Graphite — A. M. Fridman and Yu. P. Anufriev	996	77
Characteristics of Deformation of Metals at Low Temperatures — R. F. Merenkova, P. F. Koshelev, L. M. Rybakova, and B. M. Rovinskii	1001	82
Effect of Temperature and Strain Rate on Strength and Ductility of Terbium, Erbium, and Holmium — A. N. Gladkikh	1004	85
PRODUCTION SECTION		
Estimate of the Breaking Point of Models of Welded Steam Turbine Rotors — Yu. M. Andrianov, G. S. Vasil'chenko, G. N. Merinov, and V. B. Nazaruk	1009	90
Experimental Investigation of the Stressed State of Elements of Blower Impellers Carried to Failure — V. G. Bazhenov, Ya. Ya. Bol'dt, N. I. Tonyuk, and B. P. Chebaevskii	1014	96
Thermoelastic Tube Crack Inhibition — V. M. Finkel', G. B. Muravin, L. M. Lezvinskaya, and Yu. M. Tyalin	1018	100
Experimental Investigation of the Stress Distribution in Glass-Fiber Laminate Components during Their Production — I. A. Kozlov, V. M. Leshchenko, A. A. Petrov, V. F. Potapova, A. A. Ryabovol, and N. I. Tatarchuk	1022	105
Measurement of Strain at Rapidly Changing Temperatures Using Resistance Wire Strain Gauges — D. T. Shakhmatov, G. Z. Veselyi, and A. M. Osoblivets	1027	110
Evaluation of the Effect of Central Rupture (Cavity) of a Billet on Pierceability — É. S. Umanskii and Yu. L. Kanter	1032	114
Effect of Gaseous Erosion on a Decrease of the Fatigue Strength of Specimens of Titanium Alloy VT8 — V. M. Pleskach and P. A. Averchenko	1036	118
Schemes of Constructing Automatic Instruments for Continuous Recording of Inelastic and Elastic Properties of Metals — V. A. Sudnik, M. A. Krishtal, and S. A. Golovin	1038	120

Engl./Russ.

Volume 7, Number 9 September, 1975

SCIENTIFIC—TECHNICAL SECTION

Investigation of the Influence of the Strain Rate on the Growth of Cracks in Thin Metal Sheets — G. S. Pisarenko, N. V. Novikov, and A. L. Maistrenko. 1045 3
Theory of Plastic Deformation of Anisotropic Materials — B. I. Koval'chuk 1050 8
Effect of the Strength of Railroad Rails on the Formation of Contact-Fatigue Damage under Service Conditions — V. V. Lempitskii, D. S. Kazarnovskii, and L. Ya. Shnaperman 1056 13
Investigation of Fatigue Fractures near Slot-Shaped Stress Concentrators in Specimens of St.3 Steel — P. A. Pavlov and N. E. Nikulina. 1061 18
General Considerations Governing the Change in Mechanical Properties of Refractory Materials in Relation to Temperature. Part 2 — The Temperature Dependence of the Strength of Tungsten — V. A. Borisenko 1066 23
Investigation of the Heat Resistance of Alloys under One-Sided Load — V. A. Lyutyi . . . 1075 32
Strength of Low-Carbon Sheet Alloys of the Mo—Hf—B System — I. P. Bulygin, I. B. Levin, L. N. Timofeeva, and A. A. Bataeva 1080 37
Shock Compression of Some Constructional Materials at Speeds up to 1000 m/sec — G. V. Stepanov and V. V. Astanin 1085 42
Finite-Difference and Variational Methods in Flow-Theory Models and Algorithms for Elastoplastic Behavior — S. E. Umanskii 1089 46
Physicomechanical Properties of Zirconium Nitride and Niobium Carbide within the Range of Homogeneity — I. I. Spivak, V. M. Baranov, V. I. Knyazev, V. N. Rystsov, and M. A. Fedotov 1097 53
Creep of a Metastable Alloy at Low Temperatures — V. Ya. Il'ichev, I. A. Shapovalov, and I. N. Klimenko 1101 56
Influence of Residual Stresses on the Static Strength of Hard Alloys of the VK Type [Tungsten Carbide-Cobalt] — S. I. Spirina, B. M. Sverdlova, and N. I. Spirina . . 1105 60
The Damping Capacity of VNS-5 Steel — S. A. Madyanov and V. M. Kondratov 1112 66
High-Strength Three-Layered Material with Increased Damping Capacity — I. M. Kachanova and G. S. Krivonogov 1115 69
The Microstructure Picture in Plastic and Quasibrittle Fracture of Armco Iron — R. F. Merenkova and P. F. Koshelev 1119 73
Stress and Strain in an Elastically Distinct Layer in a Cylindrical Shell — A. N. Kvasha, O. S. Muz'menok, and A. G. Vaisbord 1123 78

PRODUCTION SECTION

Effect of Stress Cycle Asymmetry on the Fatigue Life of Aluminum Alloys and the Shape of Their Fatigue Curves — V. N. Shabalina 1126 81
Distribution of Shearing Forces in the Upper Flange Seams of Welded Beams due to the Horizontal Longitudinal-Braking Forces of a Crane — V. F. Zhartovskii and N. I. Vorona 1130 85
Approximate Determination of the Elastoplastic Bending of a Thick-Walled Tube — E. Ya. Neiman and N. P. Rezakova 1133 87
Speckle Holograms and Strain Measurement near Stress Concentrations in Life-Size Specimens — I. V. Volkov 1136 89
The Noise Intensity in Cracking — V. E. Vainberg, R. G. Lupashku, A. Sh. Kantor, and A. M. Kushnir 1139 92
Effect of Formaldehyde Resin on Some Metrological Characteristics of Resistance Wire Strain Gauges — I. A. Kozlov, V. M. Leshchenko, and V. F. Potapova 1142 95
Effect of Tempering Temperature on Notch Sensitivity of Quenched Steels — S. Ya. Ustilovskii, N. M. Rudnitskii, and V Kh. Ambartsumyan 1146 97
A Device for Measuring the Rim Displacement of Turbine Rotors — I. I. Ostapchuk 1147 100
A Machine for Programmed Fatigue Tests of Materials in Pure Bending — M. É. Garf and M. Ya. Filatov. 1149 102
Attachment to Hardness Measuring Devices for Automatic Application of Indentations — V. P. Krashchenko and V. A. Borisenko 1154 107

BRIEF COMMUNICATIONS

Failure Kinetics and Stability — A. N. Monoshkov, V. A. Lupin, and M. Z. Rakhman .. 1157 109
An Energy Criterion for Failure in a Plastic Polycrystalline Body — Sh. Kh. Khannanov 1160 111
High-Temperature Rheology of Bamboo Tantalum — V. O. Shestopal 1163 113

BOOK REVIEW

V. T. Troshchenko, B. A. Gryaznov, V. A. Strizhalo, L. A. Khamaza, and Yu. M. Shemegan. Methods of Investigating the Resistance of Metals to Deformation and Failure under Cyclic Loading — Reviewed by I. V. Kudryavtsev and D. M. Shur 1166 116

CHRONICLES

The Sixth All-Union Conference on the Physicochemical Mechanics of Constructional Materials — V. G. Soluyanov and Yu. I. Kozub 1168 118
Theses on Problems of the Strength of Materials and Design Elements Prepared in the Institute of Problems of Strength of the Academy of Sciences of the Ukrainian SSR in 1974 — R. I. Kuriat and R. R. Kocherovets 1170 119

Volume 7, Number 10 October, 1975

SCIENTIFIC-TECHNICAL SECTION

Applicability of the Theory of Rods to the Vibrations of Beams of Bisymmetrical Cross Section — G. S. Pisarenko, Yu. S. Vorob'ev, V. Li, and Z. V. Sapelkina 1179 3
Effect of Low Temperatures on Patterns of Fatigue-Crack Development in Steel 15G2AFDps — V. T. Troshchenko and V. V. Pokrovskii 1184 8
Stresses and Strained State of a Compensating Toroidal Element and Estimation of Its Low-Cycle Strength — M. V. Gokun, V. M. Filatov, and R. M. Shneiderovich 1188 12
Low-Cycle Fatigue Resistance of Alloy ÉP99 after Static-Loading History in a Corrosive Medium — G. N. Tret'yachenko, L. V. Kravchuk, V. V. Osasyuk, and É. P. Kosygin 1195 19
Low-Cycle Strength of Welded Joints in Structural Steels in a Pulsating Load Cycle — V. V. Larionov 1199 23
Calculation of Nonstationary Temperature Fields by the Finite-Element Method — A. L. Kvitka, P. P. Voroshko, and L. A. Zaslotskaya 1203 27
Possibility of Crack Control by Thermoelastic Fields — V. M. Finkel', A. M. Savel'ev, G. B. Muravin, and L. M. Lezvinskaya 1211 35
Rupture-End Effect in the Heating of a Brittle Cylinder — A. L. Tkachev, A. G. Lanin, V. S. Egorov, and G. V. Koroleva 1217 41
Thermal Fatigue in Lithium Fluoride Single Crystals — V. N. Gurarii, Yu. M. Korobov, V. N. Permin, and T. P. Khokhryakova 1222 46
Nuclear Failure Cracks Arising in Ionic Crystals under Load — V. S. Ryskin and A. I. Slutsker 1227 51
Weakening of Reinforced Plastics under Unilateral Heating, Taking Account of the Gas Permeability of the Material — G. V. Isakhanov 1234 59
Bending Strength of Glass-Fiber-Reinforced Plastics Produced by Winding — S. G. Abramov, N. S. Mezentsev, V. P. Nikolaev, and V. D. Popov 1237 62
Dynamic Young's Moduli of Transformer Wrapping — A. Jahowluk and F. Kolybko .. 1241 65
Mechanical Properties of Thin Copper Interlayers in Composites — V. P. Minakov, L. M. Polyakov, and A. S. Tron' 1247 71
Temperature Dependence of the Microhardness of Beryllium Single Crystals and Be—Cu Alloys — S. S. Avotin, I. I. Papirov, G. F. Tikhinskii, A. D. Tkalenko, V. G. Tkachenko, and V. I. Trefilov 1251 75
Some Aspects of the Evaluation of the Long-Term Strength of Alloys Based on Refractory BCC Metals at High Temperatures — V. V. Krivenyuk and F. E. Zelenyuk 1255 79

Study of the Scale Factor when Measuring the Strength and Deformation Characteristics of Concrete in Compression — R. O. Krasnovskii and I. S. Krol' 1262 87
Cyclic Strength of an Al—Al_3Ni Composite at Stresses Approaching the Fatigue Limit — G. E. Pletenetskii and Yu. P. Kurilo 1265 90
Experimental Research on Vibration Damping for Flat Airplane Panels — A. I. Kashchuk and V. V. Matveev 1270 95

INDUSTRIAL SECTION
Effect of Sulfur Compounds Contained in Combustion Products of Fuels on the Failure of the Surface Layers of Turbine-Blade Materials — G. N. Tret'yachenko, É. P. Kosygin, and L. V. Kravchuk 1276 101
Increasing the Structural Fatigue Strength of Maraging Steel Products by Superficial Plastic Deformation — G. N. Filimonov, A. D. Kazenina, and T. G. Tsvetaeva . 1282 107
Thermal Fatigue of Austenitic Steels at Cryogenic Temperatures — G. A. Stepanov and V. I. Skol'tsov 1287 112
Quasi-Hydroextrusion of Metals in the Temperature Range 300-4.2°K — Ya. D. Starodubov and P. A. Khaimovich 1291 116
Automatic Processing System for Data from Static Tests on Constructional Materials — V. G. Grishko, V. N. Bilan, and E. S. Tsaits 1293 118
Installation for Nonisothermal Testing of Materials — S. A. Surkov, N. N. Dergunov, Yu. P. Anufriev, U. Abrakhimov, A. M. Fridman, and V. V. Kolos 1297 122

Volume 7, Number 11 November, 1975

SCIENTIFIC-TECHNICAL SECTION
The Deformed State of Turbine Vanes Produced by Nonuniform Heating — G. S. Pisarenko and A. I. Petrenko 1301 3
Computing the Vibration Characteristics of a Packet of Twisted Blades — L. Kh. Listvinskaya 1305 7
Dislocational Structure of Iron at the Tip of a Fatigue Crack — V. S. Ivanova, V. M. Goritskii, L. G. Orlov, and V. F. Terent'ev 1312 13
An Improved Method of Calculating Critical Crack Opening — K. Kalna 1318 19
Editorial Note to the Paper by K. Kalna "An Improved Method of Calculating Critical Crack Opening" 1324 24
Comparison of Methods Employed to Extrapolate Long-Time Strength — V. K. Adamovich, Ya. F. Fridman, M. B. Revzyuk, and A. V. Stanyukovich . 1325 26
Investigation of the Vibrocreep of Alloy ÉI437B at Normal and High Temperatures — Ya. I. Tsimbalistyi, I. A. Troyan, and O. I. Marussi 1331 30
The Summation of Fatigue Damage — A. I. Makeev, A. A. Fomichev, and L. A. Trishina 1336 36
Plastic Disintegration and the Speed of Subcritical Development of Fatigue Cracks — V. M. Volkov 1339 39
Finding the Critical Size of Nonpropagating Fatigue Cracks in Steel Components after Surface Hardening — P. I. Kudryavtsev and T. I. Morozova 1343 42
Strength and Structure of Brittle Porous and Nonporous Model Materials — S. G. Tresvyatskii, V. D. Tkachenko, B. K. Lupin, and E. P. Garmash ... 1349 48
Ultimate Thermal Stresses in Disks Made from Brittle Materials — V. S. Egorov and V. P. Popov 1354 53
Stress Concentration in Disks with a Regular System of Holes — I. M. Nesatyi 1358 57
Thermal Deflection in a Parallelogram Plate — V. M. Kulakov, A. A. Uspenskii, and A. N. Frolov 1362 61
A Finite-Element Study of Large Deflections in Thick Shells — V. V. Kirichevskii and A. S. Sakharov 1365 64

Investigation of the Strength of Welded Joints between Dissimilar Metals (Kh18N10T and Bronze BrAZh9-4) – V. P. Lamashevskii, A. A. Lebedev, N. V. Novikov, and A. M. Senin 1373 72
Influence of the Type of Structure and Mechanical Properties on the Kinetics of Fracture of Titanium-Alloy Sheets – G. S. Neshpor, P. G. Miklyaev, V. G. Kudryashov, and A. G. Rakhshtadt 1377 76
Mechanism of Macrocrack Generation and Propagation in Loaded Polymers – V. S. Kuksenko, A. I. Slutsker, and D. I. Frolov 1382 81
Component Bonding in Composites – É. A. Éskin and A. S. Petrov 1386 85
Effect of Thermal Treatment on the Mechanical Properties and Accumulation of Submicrocracks in Fluoroplastics – M. A. Martynov, A. Ya. Gol'dman, P. A. Il'chenko, Yu. S. Polyakov, and A. I. Andreeva 1390 89
The Dynamics of Twinning in Metal Single Crystals – M. M. Brodskii and P. L. Pakhomov 1394 93
Deformation Strengthening of Beryllium – I. N. Khristenko and I. I. Papirov 1397 95
Effect of Vacuum on Fatigue Fracture Development in Iron at Various Deformation Amplitudes – N. M. Grinberg 1402 100
Parametric Oscillations in a Mechanical System with an Imperfectly Elastic Material – Nguen van Dao 1407 105
A Method of Analytic Description of Mechanical Hysteresis – Yu. P. Busarov, N. S. Dumarevskaya, and Yu. V. Sidorenko 1414 111

PRODUCTION SECTION
Effects of Heating on the Carrying Capacity of Composite Fiberglass Components – G. N. Tret'yachenko, V. S. Dzyuba, and V. A. Tokaravskii 1418 115
The Effect of Elevated Temperatures on the Anisotropy of Strength and Ductility of Steel 2Kh13 – M. I. Volskii, T. V. Molochnaya, A. N. Terekhov, and V. I. Balakin 1422 119
The Resistance to Failure of a Metastable Austenitic Steel – Yu. G. Virakhovskii, Ya. B. Gurevich, and V. Yu. Gol'tsev 1426 123

Volume 7, Number 12 December, 1975

SCIENTIFIC–TECHNICAL SECTION
The Stress State of Structural Elements of Vessels Subjected to External Hydrostatic Pressure – G. S. Pisarenko, P. P. Voroshko, A. L. Kvitka, A. S. Tsybenko, O. P. Shabatina, and Yu. M. Rodichev 1431 3
Life of Thermally Stressed Machine Parts – I. A. Birger, I. V. Dem'yanushko, and Yu. M. Temis 1436 9
Approximate Solution of the Genesis Problem of Initial Properties and States – V. P. Degtyarëv 1445 17
A Theory of the Accumulation of Damages – G. I. Dubrovina, Yu. P. Sokovnin, Yu. P. Gus'kov, P. S. Sokolov, and S. D. Volkov 1450 21
Strength of Reinforced Refractory Materials. Communication 1. Determination of Mechanical Characteristics in Bend Tests – G. A. Gogotsi, Ya. L. Grushevskii, A. A. Kurashevskii, and V. A. Artemov 1454 25
Communication 2. Study of Heat Resistance under Various Thermal Loading Conditions – G. A. Gogotsi, V. A. Artemov, Ya. L. Grushevskii, and A. A. Kurashevskii. . 1459 30
Determining the Heat-Resistance Criteria on the Surface of Brittle Materials during Convective Heat Exchange – Yu. P. Kotel'nikov 1464 35
Automatic Strength Calculation of Turbine Body and Rotor Parts – Ya. M. Grigorenko, M. Ya. Kodner, N. P. Andreeva, N. D. Draigor, N. G. Romanov, and A. I. Shinkar' 1468 39

Thermocyclic Strength of a Molybdenum Single Crystal at High Temperatures – V. A. Strizhalo and E. I. Uskov 1473 43
The Effect of the Loading Parameters on the Laws Governing the Distortion of the High-Temperature Alloy ÉI617 under Conditions of Cyclic Temperature Variation – D. P. Sinyavskii and A. P. Gopkalo 1477 47
Investigation of the Accumulation of Damages in Nonstationary Low-Cycle Rigid Loading – M. A. Daunis and R. A. Stasyunas 1480 50
Effect of Cyclic Heating on the Properties of a Joint of Different Metals – A. S. Tron', L. A. Zabashta, and A. T. Lopata 1487 57
Investigation of Deformation Fields in the Danger Zone of Titanium Alloy Sheets – V. N. Merkulov 1491 61
The Dynamic Strength of Some Pure Metals and the Logarithmic Modulus of Plasticity – D. A. Kal'ner 1494 64
Experimental Determination of the Nonsteady Hydrodynamic Force Acting on a Blade Oscillating in a Water Current – A. A. Kaminer and B. M. Kavitskii 1496 66
Computation of Maximum Stresses in a Shallow Cylinder Subjected to Axial Compression – V. T. Grinchenko, V. G. Karnaukhov, and I. K. Senchenkov 1500 69
Thermoelastoplastic Problem for a Hollow Sphere Exposed to Radiation – É. I. Grigolyuk and A. V. Borodin 1504 72
Investigation of High-Temperature Stress Relaxation in Refractory Materials during Alternating Torsional Loading – Yu. V. Miloserdin, B. D. Semenov, and V. N. Chechko 1511 78
Effect of Carbon on High-Temperature Strength of Tungsten – V. N. Pod'yachev and M. I. Gavrilyuk 1514 81
Evaluation of Errors in Finding the Strength Characteristics of Refractory Metals – V. N. Geminov, A. A. Uglov, and A. A. Kaplan 1517 84
Stressed State of Systems Comprising Solids of Revolution – V. I. Savchenko, V. B. Anisimova, I. I. Mazur, O. I. Chernova, and G. M. Ostrovskii 1521 87

PRODUCTION SECTION
Approximation Method of Calculating the Stress – Strain State of a Toroidal Compensator – M. V. Gokun 1526 91
Investigation of Mechanical Properties of 03Kh12N10MT Steel at Low Temperatures – E. S. Kagan, V. I. Kozlovskaya, G. N. Grikurov, and Ya. V. Trantsevich 1531 96
A Method of Assessing the Cavitation-Mechanical Strength of Materials in Various Media – Yu. G. Veksler, Yu. A. Karasyuk, and V. G. Sorokin 1534 99
The Problem of Testing Glass in Compression – A. P. Poleshko 1537 101
Method of Measuring Strains in Rods with a Capacitive Strain Gauge – G. V. Stepanov and A. P. Vashchenko 1540 104
Strength of Commutators in Electric Machines – I. I. Ostapchuk 1543 106

BRIEF COMMUNICATIONS
Estimating the Influence of Cyclic Heat Exchanges in the Temperature Range 20-300°C on the Characteristics of Strain Gauges Based on Polyimide Adhesive – G. A. Tsareva, A. N. Ser'eznov, and N. A. Oboturova 1547 110

CHRONICLES
The 6th All-Union Conference on Strength and Plasticity – A. A. Lebedev 1550 113

INDEX
Author Index, Volume 7, Numbers 1-12, 1975 1555
Tables of Contents, Volume 7, Numbers 1-12, 1975 1561